



## FIG. 1A

CDR1  
EVQLLEQSGA EVRKPGSSVK VSCKASGGTF SGHVTITWRQ APGQGLEWMG ESIPFGSAN YAONYAOKER DRVSIADES TSTSFIELSN LRSDDTAVY CARDPRRYCS AGRCTRGFEQ OWGQGTLTVY SS

CDR2

CDR3

CDR1  
EVQLLEQSGA EVKKPGSSVK VSCQVFGDTF SRYTIQWLRLQ APGQGPFWMG NIIEVYNTPN YAOKEGRLS ITADDSTSTA YMEISSIRSE DTA VYFCARV VPNAIRHITL GYEDIWGQG TLTVTSS

CDR2

CDR3

## FIG. 1B



## FIG. 1C

EVQLLEQSGA EVKPGSSVK VSCKASGGTF SGHVSWVRQ AFGQGLEWMG GSISECTSNSAQKEGRVS ITADESASTA YMEISSIRSE DTATYYCAKD PPRECSGGNCYTGFEQDQWGQ GTLVTVSS

CDR1 CDR2 CDR3

EVQLLESGGG WQPGISRL SCAASGFTFK TYGMHWRQA PGKGLEWVAG ISEDGSNOY ADSVKGRFVSRDNSRDTVF LQMSLRLED TAVYYCATEG SPEGSIKGRYYLENWGQGTI VTVSS

CDR1 CDR2 CDR3

## FIG. 1D



FIGURE 1E

EVQLLESGGG VVQPGRLRL SCAASGFTFS AYGMHWVRQA <sup>CDR 1</sup> PGKGLEWVAG IWEDGSNQYYSDSVKGRFTV - <sup>CDR 2</sup>  
<sup>CDR 3</sup> SRDNSRNTLF LQMNSLRPED TAVYYCATEV LEFSIKGRYY LENWGQGTLVTSS

FIGURE 1F

EVQLLESGPG LVKPSGTLSL TCTVSGGSIR SSHWWWSWVRQ <sup>CDR 1</sup> PPGKGLEWIG EVFEESGSIYNPSLNDRVFM - <sup>CDR 2</sup>  
<sup>CDR 3</sup> SVDKSKDQVS LRLSSVTAAD TAVYYCARSP IKMNQGRMML DAFDIWGQGTLVIVSS

FIGURE 1G

EVQLLESGSE VKKPGSSVKV SCRASGGSFR SYNFNHWVRQA <sup>CDR 1</sup> PGQGLEWMGG IIPMEGTANYAQKFGQGRVTI - <sup>CDR 2</sup>  
<sup>CDR 3</sup> TADESTATGY MELSSLRSED TAVYYCAMPY PKHCSRGSSCW GWFDPRWGQGLVTSS



## FIG. 2A

CDR1  
AELTQSPGTL SLSPGERATL SCRASOSVSS NYLAWYQQRP GOAPRLLIYG ASSRATGIPD RFSGSGSGTD FTLTISRLEP EDFAVYCOL YGNRWTFGQ GTKVEIK  
CDR2  
CDR3

CDR1  
AELTQSPATL SLSPGERATL SCRASOSVNK YLAWYQQKPG QAPRLLIYDA SNRATGIPAR FSGSGSGTDF TLTISNLEPE DFAVYCCOOR SDWVTFGGGT KVEIK  
CDR2  
CDR3

## FIG. 2B



## FIG. 2C

CDR1  
AELTQSPGTL SLSPGERATL SCGASOSYRS NYLAWYQOKP GOAPRLIYG VSSRATGIPD RFGSGSGTD FTLTISRLEP EDFAVVYCQQ YGSSPRTFGQ GTKLEIK  
CDR2  
CDR3

CDR1  
AELTQSPATL SVSPGERASL SCRASOSYGN NLAWYQOKPG QAPRLIYG NTRATGTPDR FSGSGSGTEF TLTISSLOSE DFAVYFCQHY STWPLTFGGG TKVEFK  
CDR2  
CDR3

## FIG. 2D

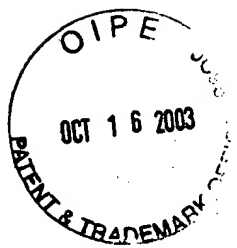


FIGURE 2E

CDR 1 CDR 2  
AELTQSPGTL SLVGERATL SCRASQNIYS GYLGWYQQKP GQPPRLLYG ASNRATGIPD  
- RFGSGSGTD FTLTISRLES EDFAVYCCQ YGSPPIYFGQ GTKVEIK

FIGURE 2F

CDR 1 CDR 2  
AELTQSPSSL SAFVGDRVTI TCRASQSISR NLNWYQQKPG TAPKVLIVAA SSLQSGVPSR  
- FSGSGSGTDF TLTITSLQPE DFATYCCQS YTIPIRIFGQG TKVEIK

FIGURE 2G

CDR 1 CDR 2  
AELTQSPGTL SLSPGERATL SCRASQSLSS KYLAWYQQKP GQAPRLFYD ASSRAIGIPD  
- RFGSGSGTD FTLTISRLEP EDFAVYCCQ YGIPIRIFGQG TKVEIK

**FIG. 3A**

GAGCTCAGC AGTCTCCAGG CACCCTGTCT TTGTCTCCAG GGGAAAGAGC CACCCTCTCC TGCAGGGCCA  
GTCAGAGTGT TAGCAGCAAT TACTTAGCCT GGTACCAGCA GAGACCTGGC CAGGCTCCCA GGCTCCTCAT  
CTATGGTGCA TCCAGCAGGG CCACTGGCAT CCCAGACAGG TTCAGTGCCA GTGGTCTGG GACAGACTTC  
ACTCTACCA TCAGCAGACT GGAGCCTGAA GATTTGCGAG TGTATTACTG TCAGCTTTAT GGTAACTCAC  
GTTGGACGTT CGGCCAAGGG ACCAAGGTGG AGATCAAA

**FIG. 3B**

GAGTCACTC AGTCTCCAGC CACCCTGTCT TTGTCTCCAG GGGAAAGAGC CACCCTCTCC TGCAGGGCCA  
GTCAGAGTGT TAACAAGTAC TTAGCCTGGT ACCAACAGAA ACCTGGCCAG GCTCCCAGGC TCCTCATCTA  
TGATGCATCC AACAGGGCCA CTGGCATCCC AGCCAGGTTT AGTGGCAGTG GGTCTGGGAC AGACTTCACT  
CTCACCATCA GCAACCTAGA GCCTGAAGAT TTTGCGAGTTT ATTACTGTCA GCAGCGTAGC GACTGGGTCA  
CTTTCGGCGG AGGGACCAAG GTGGAGATCA AA





FIG. 3C

GAGCTCAGC AGTCTCCAGG CACCCTGTCT TTGTCTCCAG GGGAAAGAGC CACCCTCTCTCC TCGGGGGCCA  
GTCAGAGTGT TAGGAGCAAC TACTTAGCCT GGTACCAGCA AAAACCTGGC CAGGCTCCCA GGCTCCTCAT  
CTATGGTGTA TCCAGCAGGG CCACTGGCAT CCCAGACAGG TTCAGTGGA GTGGGTCTGG GACAGACTTC  
ACTCTACCA TCAGCAGACT GGAGCCTGAA GATTTGCGAG TGTATTACTG TCAGCAGTAT GGTAGCTCAC  
CTCGGACTTT TGGCCAGGG ACCAAGTTGG AGATCAAA

FIG. 3D

GAGCTCAGC AGTCTCCAGC CACCCTGTCT GTGTCTCCAG GGGAAAGAGC CTCCCTCTCTCC TGCAGGGCCA  
GTCAGAGTGT CGGTAACAAT TTAGCTTGGT ATCAGCAGAA ACCTGGCCAG GCTCCCAGGC TCCTCATTTA  
TGGTGGAAAC ACCAGAGCCA CTGGTACCCC AGACAGGTTT AGTGGCAGTG GGTCTGGGAC AGAATTCAC  
CTCACCATCA GCAGCCTGCA GTCTGAGGAC TTTCAGTTT ATTTCTGTCA AACTATAGT ACCTGGCCGC  
TCACTTTCGG CGGGGGGACC AAGGTCGAGT TCAAG





**FIGURE 3E**

GAGGTGCAGC TGCTCGAGTC TGGGGGAGGC GTGGTCCAGC CTGGGAGGTC CCTGAGACTC TCCTGTGCAG  
CGTCTGGATT CACCTTCAGT GCTTATGGCA TGCACCTGGT CGCCAGGCT CCAGCAAGG GGCTGGAGTG  
GGTGGCAGGT ATATGTTTGG ATGGAAGTAA TCAATACTAT TCAGACTCCG TGAAGGGCCG ATTCACCGTC  
TCCAGAGACA ATTCAGGAA CACGCTGTT CTGCAAAATGA ACAGCCTGAG ACCGAGGAG ACGGCTGTCT  
ATTACTGTGC GACAGAGGTA CTTTTTGGAT CGATTAAAGGG GCGTTACTAC CTTGAAAACT GGGGCCAGGG  
AACCTGGTC ACCGTCCTCT CA

**FIGURE 3F**

GCGGAGCTCA CCCAGTCTCC ATCGTCCCTG TCTGCATTG TNGGAGACAG AGTCACCATC ACTTGCCGGG  
CAAGTCAGAG TATTAGCAGG AACTTAAAT GGTATCAGCA GAAACCAGGG ACAGCCCCTA AGTCCCTGAT  
CTATGCTGCA TCCAGTTTGC AAAGTGGGT CCATTCGAGG TTCAGTGGA GTGGATCTGG GACAGATTTC  
ACTCTACCA TCACCAGTCT GCAACCTGAA GATTTTGCA CTTACTATTG TCAACAGAGT TACACAACCC  
CTCGGAGGT CGGCCAAGGG ACCAAGGTGG AAGTCAAA

**FIGURE 3G**

GCGGAGCTCA CGCAGTCTCC AGGCACCCTG TCTTTGTCTC CAGGGGAAAG AGCCACCCTC TCCTGCAGGG  
CCAGTCAGAG TCTTAGCAGC AAATACTTAG CNTGGTACCA ACAGAAACCT GGCCAGGCTC CCAGGCTCTT  
CATTATGAT GCATCCAGCA GGGCCACTGG CATCCAGAC AGGTTTCAGTG GCAGTGGGTC TGGGACAGAC  
TTCACCTCA GCATCAGCAG ATTGAGCCT GAAGATTTTG CAGTGTATTA CTGTCAGCAG TATGGAACAC  
CTCGCACCTT CGGCCAGGG ACCAAGGTGG AAATCAAA

FIG. 4A

CTCGAGCAGT CTGGGGCTGA GTGAGGAAG CCTGGGTCCT CGGTGAAGGT CTCCTGCAAG GCTTCTGGAG  
GCACCTTCAG CGGCCATGTT ATCACCTGGG TCGACAGGC CCTGGACAA GGACTTGAGT GGATGGGAGA  
GAGCATCCCT ATCTTTGGTT CCGCAAACTA CGCTCAAAAC TACGCTCAGA AATTCGGGA CAGAGTCTCG  
ATTATCGCGG ACGAATCCAC GAGCACGTCG TTCAATTGAGC TGAGCAACCT GAGATCTGAC GACACGGCCG  
TCTACTACTG TCGAGAGAGAC CCTCCAAGAT ATTGCAGTGC TGGTAGATGC TACCCGGGAT TCTTCCAGCA  
GTGGGGCCAG GGCACCCCTCG TCACCGTCTC CTCA

FIG. 4B

CTCGAGCAGT CTGGGGCTGA GTGAAGAAG CCTGGGTCCT CGGTGAAGGT CTCCTGTCAG GTTTTGGAG  
ACACCTTCAG CAGATACACT ATTCAGTGGT TCGACAGGC CCTGGACAA GGCCTGAGT GGATGGGAAA  
TATCATCCCT GTCTATAATA CACCAACTA CGCGCAGAAG TTTCAGGGCA GACTCTCGAT AACCGCCGAC  
GATTCCACGA GCACAGCCTA CATGGAACCTG AGTAGCCTCA GATCTGAGGA CACGGCCGTC TATTTCTGTG  
CGAGAGTCGT AATACCAAT GCAATCCGC ACACGATGGG ATATTACTTT GACTACTGGG GCCAGGGAAC  
CCTGGTCACC GTCTCCTCA



FIG. 4C

CTCGAGCAGT CTGGGGCTGA GGTGAAGAAG CCTGGGTCCT CAGTGAAGT CTCCTGCAAG GCTTCTGGAG  
GCACCTTCAG CGGCCATGTT ATCAGCTGGG TGCACAGGC CCCTGGACAA GGGCTTGAGT GGATGGGGG  
GAGTATCTCT TTCTTTGGCA CATCAAACTC CGCACAGAAG TTCCAGGGCA GAGTCTCGAT TACCGCGGAC  
GAATCCGGCA GCACAGCCTA CATGGAGCTG AGTAGCCTGA GATCGGAGGA CACGGCCATC TATTACTGTG  
CGAAAGACCC TCCAAGATTT TGAGTGGTG GTAACTGCTA CCGGGGTTT TTCCAGCAGT GGGGCCAGGG  
CACCTGGTC ACCGTCTCCT CA

FIG. 4D

CTCGAGTCGG GGGGAGGCGT GGTCCAGCCT GGGAGGTCCC TGAGACTCTC CTGTGCAGCG TCTGGATTCA  
CCTTCAAGAC GTATGGCATG CACTGGGTCC GCCAGGCTCC AGGCAAGGG CTGGAGTGGG TGGCAGGTAT  
TTCGTTTGAT GGAAGTAACC AATATTACGC AGACTCCGTG AAGGGCCGAT TCATCGTCTC CAGAGACAAT  
TCCAGGGACA CGGTGTTTCT GCAGATGAGC AGCCTGAGAC TCGAGGACAC GGCTGTCTAT TACTGTGCGA  
CAGAGGGTTC TCCTTTTGGC TCGATTAAAG GCGGTTACTA CCTTGAAAT TGGGGCCAGG GAACCCCTGT  
CACCGTCTCC TCA



**FIGURE 4E**

GAGGTGCAGC TGCTCGAGTC TGGGGGAGGC GTGGTCCAGC CTGGGAGGTC CCTGAGACTC TCCTGTGCAG  
CGTCTGGATT CACCTTCAGT GCTTATGGCA TGCACCTGGT CCGCCAGGCT CCAGGCAAGG GGCTGGAGTG  
GGTGGCAGGT ATATGGTTTG ATGGAAGTAA TCAATACTAT TCAGACTCCG TGAAGGGCCG ATTACCCGTC  
TCCAGAGACA ATCCAGGAA CACGCTGTTT CTGCAATGA ACAGCCTGAG ACCCGAGGAC ACGGCTGTCT  
ATTACTGTGC GACAGAGGTA CTTTTTGGAT CGATTAGGG GCGTTACTAC CTTGAAAACT GGGGCCAGGG  
AACCCCTGGTC ACCGTCCTCT CA

**FIGURE 4F**

GAGGTGCAGC TGCTCGAGTC GGGCCAGGA CTGGTGAAGC CTTCGGGAC CCTGTCCCTC ACCTGCAC TG  
TCTCTGGTGG CTCATCAGG AGCAGTCACT GGTGGAGTTG GGTCGCCAG CCCCAGGGA AGGCACTGGA  
GTGGATTGGA GAAGTCTTTT TTAGTGGAAG CACCATCTAC AACCCATCCC TCAACGATCG AGTCTTCATG  
TCTGTAGACA AGTCCAAGGA CCAGGTCCTC CTGAGGCTGA GCTCTGTGAC CGCCGCGGAC ACGGCCGTGT  
ATTACTGTGC GAGATCCCC ATAAATGA ATCAGGGAAG AATGATGTTG GATGCCTTTG ATATCTGGGG  
CCAGGGGACA CTCGTCATCG TCTCTTCC

**FIGURE 4G**

GAGGTGCAGC TGCTCGAGTC TGGGTCTGAG GTGAAGAAGC CTGGGTCTTC GGTGAAGTC TCCTGCAGGG  
CCTCTGGAGG CAGCTTCAGA AGCTACAATT TCAATTGGGT GCGACAGGCC CCTGGACAAG GTCTTGAGTG  
GATGGGAGGC ATCATCCCTA TGTTCCGGAAC AGCAAACTAC GCACAGAAGT TTCAGGGCAG AGTCACAATT  
ACCGCGGACG AATCCACGGC CACAGGCTAC ATGGAGTTGA GCAGTCTGAG ATCTGAAGAC ACGGCCGTTT  
ATTACTGTGC GATGCCCTAT CCAAAACATT GCAGTCGTGG AAGTTGCTGG GCTGTTTGG ACCCCTGGGG  
CCAGGGAACT CTGGTCACCG TGCTTCA